CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	**Docket No. 99-AFC-3C**
	)	**Order No. 05-0316-03**
Metcalf Energy Center, LLC's	)	**ORDER APPROVING A PEITITON TO**
METCALF ENERGY CENTER PROJECT	)	**MODIFY AIR QUALITY CONDITIONS**
	)	
	)	

On November 17, 2004, Metcalf Energy Center, LLC (MEC, LLC) submitted a Petition to maintain the facility's post-commissioning daily and annual emission limits at the previously permitted level. The Petition proposes to increase hourly carbon monoxide (CO) emission limits while reducing the maximum number of firing hours during project commissioning. MEC also proposes a number of other air quality emission changes during commissioning, startup, and first-year operation including reductions in oxides of nitrogen (NOx) and corresponding emission reduction credits. There are no changes requested in any emission limits during normal plant operation.

The modifications are supported by the Bay Area Air Quality Management District, which has published a revised Preliminary Determination of Compliance (PDOC), and plans to issue a Final DOC in the near future.

STAFF RECOMMENDATION

The Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations and recommends approval of MEC, LLC's petition to modify the Commission Decision for the MEC, LLC Project. Specific recommendations are the following:

- Reduce the annual nitrogen oxides (NOx) emission limit by 35 tons and the corresponding offset requirement for the first year of operation, including commissioning.
- Establish an annual limit of 30 hours for each gas turbine for cold startups and turbine tuning activities.
- Provide increased CO hourly, and daily emission limits for commissioning operations based on recent experience at other, similar gas turbine power plants.
- Provide increased CO emission limits for cold steam turbine startup, and gas turbine tuning events based on recent experience at other, similar gas turbine power plants.
- Provide increased CO, NOx and POC emission limits for routine gas turbine shutdowns based on recent experience at other, similar gas turbine power plants.

- Eliminate hourly emission limits for all gas turbine startups, but retain overall emission limits for the three-hour period of routine (hot and warm) startup events.
- Establish a gas turbine cold startup and gas turbine tuning duration limit of 6 hours for each event.
- Change various source testing and other regulatory reporting due dates to allow additional time to conduct tests and prepare reports.
- Change the ammonia slip calculation methodology to be consistent with current Bay Area Air Quality Management District (BAAQMD) procedures.
- Provide new and revised permit definitions.
- Make a small number of editorial corrections within the conditions and/or verifications.

COMMISSION FINDINGS

Based on staff's analysis, the Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Commission finds that:

- The petition meets all the filing criteria of Title 20, section 1769(a) concerning post-certification project modifications;
- The modification will not change the findings in the Energy Commission's Final Decision pursuant to Title 20, section 1755;
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;
- The change will be beneficial to the project owner, because it will ensure that the facility can be operated in compliance with the conditions of certification. It will be beneficial to the public because it will increase the reliability of the facility without increasing the facility's daily and annual post-commissioning emission limits.
- The change is based on information that was not available to the parties prior to Energy Commission certification because it is based on data from actual operational experience that was not in existence at that time.

CONCLUSION AND ORDER

The Commission hereby adopts Staff's recommendations and approves the following changes to the MEC Project Decision. New language is shown as **bold** and underlined and deleted language is shown in ~~strikeout~~:

Definitions

Gas Turbine Cold Startup Period: The lesser of the first 360 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of condition 20(b), following a shutdown of at least 72 hours.

Commissioning Activities: All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the MEC construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, **air pollution control systems,** and associated electrical delivery systems.

Commissioning Period: The Period shall commence when all mechanical, electrical, and control systems are installed and individual system startup has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has **successfully** completed performance testing, is available for commercial operation, and has initiated sales to the power exchange. **The commissioning period shall not exceed 180 days under any circumstances.**

Combustor Tuning Activities: Any testing, adjustment, tuning, and calibration activities recommended by the gas turbine manufacturer to insure safe and reliable steady-state operation of the gas turbines following replacement of the combustor components, during seasonal tuning events, or at other times when recommended by the turbine manufacturer or necessary to maintain low emissions performance. This includes, but is not limited to, adjusting the amount of fuel distributed between the combustion turbine's staged fuel systems to simultaneously minimize NOx and CO production while minimizing combustor dynamics and ensuring combustor stability.

Combustor Tuning Period: The period, not to exceed 360 minutes, when combustor tuning activities are taking place.

AQ-1 The owner/operator of the Metcalf Energy Center (MEC) shall minimize emissions of carbon monoxide and nitrogen oxides from S-1 and S-3 Gas Turbines and S-2 and S-4 Heat Recovery Steam Generators (HRSGs) to the maximum extent possible during the commissioning period. Conditions 1 through 12 shall only apply during the commissioning period as defined above. Unless otherwise indicated, Conditions 13 through 47, **56, and 57** shall apply after the commissioning period has ended. **(PSD for NOx and CO)**

Verification: The owner/operator shall submit a monthly compliance report to the California Energy Commission Compliance manager (CPM). In this report the owner/operator shall indicate how this Condition is being implemented.

AQ-10 The total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM_{10}, and sulfur dioxide that are emitted by the Gas Turbines (S-1 & S-3) and Heat Recovery Steam Generators (S-2 & S-4) during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in Condition 25, except that total, cumulative NOx mass emissions from S-1, S-2, S-3, and S-4 shall not exceed ~~185~~ **150** tons

during any consecutive twelve-month period which includes a portion of the Commissioning Period. **(Offsets)**

Verification: In the monthly compliance report the owner/operator shall indicate the cumulative number of firings **hours** without SCR. The owner/operator shall submit a copy of the completion notice to the CPM.

AQ-11 Combined pollutant mass emissions from the Gas Turbines (S-1 & S-3) and Heat Recovery Steam Generators (S-2 & S-4) shall not exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-1 & S-3)

NOx (as NO_2)	4,805 pounds per calendar day	381.2 pounds per hour
CO	~~11,498~~ **20,000** pounds per calendar day	~~930~~ **5000** pounds per hour
POC (as CH_4)	495 pounds per calendar day	
PM_{10}	468 pounds per calendar day	
SO_2	42 pounds per calendar day	

(PSD for NOx and CO)

Verification: In the monthly compliance report the owner/operator shall indicate any violations of the above emission limits.

AQ-12 Prior to the end of the Commissioning Period **and not later than 90 days after commencement of the commissioning period**, the Owner/Operator shall conduct a District and CEC approved source test using external continuous emission monitors to determine compliance with Condition 21. The source test shall determine NOx, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three (3) start-up and three (3) shutdown periods. Twenty (20) working days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC Compliance Program Manager (CPM) a detailed source test plan designed to satisfy the require-ments of this condition. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within twenty (20) working days of receipt of the plan; otherwise, the plan shall be deemed approved. The Owner/Operator shall incorp-orate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CEC CPM within ~~thirty (30)~~ **sixty (60)** days of the source testing date. **(PSD for NOx and CO)**

Verification: Approval of the source test plan and receipt of the source test reports is the verification of compliance with this Condition.

Conditions for the Gas Turbines (S-1 & S-3) and the Heat Recovery Steam

Generators (HRSGs; S-2 & S-4)

AQ-13 The Gas Turbines (S-1 and S-3) and HRSG Duct Burners (S-2 and S-4) shall be fired exclusively on natural gas. (BACT for SO_2 and PM_{10})

Verification: As part of the semiannual Air Quality Reports ~~(as required by **AQ-43**)~~, the project owner shall indicate the date, time, and duration of any violation of this Condition.

AQ-16 The combined cumulative heat input rate for the Gas Turbines (S-1 & S-3) and the HRSGs (S-2 & S-4) shall not exceed 35,274,060 MM BTU **(HHV)** per year. (Offsets)

Verification: As part of the Air Quality monthly Reports, the owner/operator shall include information on the date and time when the ~~daily~~ **annual** fuel consumption exceeded this ~~daily~~ **annual** limit.

AQ-20 The Gas Turbines (S-1 & S-3) and HRSGs (S-2 & S-4) shall comply with requirements (a) through (h) under all operating scenarios, including duct burner firing mode and steam injection power augmentation mode. Requirements (a) through (h) do not apply during a gas turbine start-up**,** ~~or~~ **a Gas Turbine** shutdown**, a Gas Turbine cold startup, or a combustor tuning period**. (BACT, PSD, and Toxic Risk Management Policy)

(a) Nitrogen oxide mass emissions (calculated as NO_2) at P-1 (the combined exhaust point for the S-1 Gas Turbine and the S-2 HRSG after abatement by A-1 SCR System) shall not exceed 19.2 pounds per hour or 0.00904 lb/MM BTU (HHV) of natural gas fired. Nitrogen oxide mass emissions (calculated as NO_2) at P-2 (the combined exhaust point for the S-3 Gas Turbine and the S-4 HRSG after abatement by A-3 SCR System) shall not exceed 19.2 pounds per hour or 0.00904 lb/MM BTU (HHV) of natural gas fired. (PSD for NOx)

(b) The nitrogen oxide emission concentration at emission points P-1 and P-2 each shall not exceed 2.5 ppmv, on a dry basis, corrected to 15% O_2, averaged over any 1-hour period. (BACT for NOx)

(c) Carbon monoxide mass emissions at P-1 and P-2 each shall not exceed 28.07 pounds per hour, averaged over any rolling 3-hour period. (PSD for CO)

(d) When the heat input to a combustion turbine exceeds 1700 MM BTU/hr (HHV), the carbon monoxide emission concentration at P-1 and P-2 each shall not exceed 6.0 ppmv, on a dry basis, corrected to 15% O_2, and the carbon monoxide mass emission rate at P-1 an**d** P-2 each shall not exceed 0.0132 lb/MM BTU of natural gas fired, averaged over any rolling 3-hour period. If compliance source test results and continuous emission monitoring data indicate that a lower CO emission concentration level can be achieved on a consistent

basis (with a suitable compliance margin) over the entire range of turbine operating conditions, including duct firing and power steam augmentation operations, and over the entire range of ambient conditions, the District will reduce this limit to a level not lower than 4.0 ppmv, on a dry basis, corrected to 15% O_2. If this limit is reduced, the corresponding mass emission rate limit specified in Condition 20(c) shall also be modified to reflect this reduction. (BACT for CO)

(e) Ammonia (NH_3) emission concentrations at P-1 and P-2 each shall not exceed 5 ppmv, on a dry basis, corrected to 15% O_2, averaged over any rolling 3-hour period. This ammonia emission concentration shall be verified by ~~the continuous recording of the ammonia injection rate to A-1 and A-2 SCR Systems~~ **the District-approved ammonia slip calculation method in effect February 2005**. The ~~correlation between the gas turbine and HRSG heat input rates, A-1 and A-2 SCR System ammonia injection rates, and corresponding ammonia emission concentration at emission points P-1 and P-2~~ **factors to be used in the calculation method** shall be determined in accordance with permit Condition 30. (TRMP for NH_3)

(f) Precursor organic compound (POC) mass emissions (as CH_4) at P-1 and P-2 each shall not exceed 2.7 pounds per hour or 0.00126 lb/MM BTU of natural gas fired. (BACT)

(g) Sulfur dioxide (SO_2) mass emissions at P-1 and P-2 each shall not exceed 1.28 pounds per hour or 0.0006 lb/MM BTU of natural gas fired. (BACT)

(h) Particulate matter (PM_{10}) mass emissions at P-1 and P-2 each shall not exceed 9 pounds per hour or 0.00452 lb PM_{10}/MM BTU of natural gas fired when HRSG duct burners are not in operation. Particulate matter (PM_{10}) mass emissions at P-1 and P-2 each shall not exceed 12 pounds per hour or 0.00565 lb PM_{10}/MM BTU of natural gas fired when HRSG duct burners are in operation. (BACT)

(i) Testing to confirm the PM_{10} emissions levels shall occur at least three (3) times per year during each of the first two (2) years of operation. Each year, at least one (1) monitoring test shall occur during winter months.

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date, time, and duration of any violation of this Condition. The owner/operator shall also include quantitative information on the severity of the violation.

AQ-21 The regulated air pollutant mass emission rates from each of the Gas Turbines (S-1 and S-3) during a start-up or a shutdown **or during a combustor tuning period** shall not exceed the limits established below. (PSD)

	Start-Up (lb/start-up)	~~Start-Up (lb/hr)~~	**Cold Startup Or Combustor Tuning (lb/period)**	Shutdown (lb/shutdown)
Oxides of Nitrogen (as NO_2)	240	~~80~~	**480**	~~18~~**80**
Carbon Monoxide (CO)	2,514	~~902~~	**5,028**	~~43.8~~**902**
Precursor Organic Compounds (as CH_4)	48	~~16~~	**96**	~~5~~**16**

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date, time, and duration of any violation of this Condition. The owner/operator shall also include quantitative information on the severity of the violation.

AQ-22 **Not more than one of** ~~T~~**t**he Gas Turbines (S-1 and S-3) shall ~~not~~ be in start-up mode **or undergoing combustor tuning at any one time** ~~simultaneously~~. (PSD)

Verification: In the monthly compliance report the owner/operator shall indicate any violations of this Condition.

AQ-24 Total combined emissions from the Gas Turbines and HRSGs (S-1, S-2, S-3, and S-4), including emissions generated from the cooling tower and during Gas Turbine start-ups**, Gas Turbine** ~~and~~ shutdowns**, and Gas Turbine Combustor tuning activities** shall not exceed the following limits during any calendar day:

(a) 1,362.6 pounds of NOx (as NO_2) per day (CEQA)
(b) 7,891.1 pounds of CO per day (PSD)
(c) 230.2 pounds of POC (as CH_4) per day (CEQA)
(d) 571.4 pounds of PM_{10} per day (PSD)
(e) 57.9 pounds of SO_2 per day (BACT)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation.

AQ-25 Cumulative combined emissions from the Gas Turbines and HRSGs (S-1, S-2, S-3, and S-4), including emissions generated from cooling towers and during gas turbine start-ups**, Gas Turbine** ~~and~~ shutdowns**, and Gas Turbine**

Combustor tuning activities shall not exceed the following limits during any consecutive twelve-month period:

(a) 123.4 tons of NOx (as NO_2) per year	(Offsets)
(b) 588 tons of CO per year	(Cumulative Increase, PSD)
(c) 28 tons of POC (as CH_4) per year	(Offsets)
(d) 91.3 tons of PM_{10} per year	(Offsets)
(e) 10.6 tons of SO_2 per year	(Cumulative Increase)

Verification: As part of the annual Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation.

AQ-27 The owner/operator shall demonstrate compliance with conditions 14 through 17, 20(a) through 20(d), 21, 22, 24(a), 24(b), 25(a), and 25(b) by using properly operated and maintained continuous monitors (during all hours of operation including equipment Start-up and Shutdown **and Combustor Tuning** periods) for all of the following parameters:

(a) Firing Hours and Fuel Flow Rates for each of the following sources: S-1 & S-2 combined and S-3 & S-4 combined.
(b) Oxygen (O_2) Concentrations, Nitrogen Oxides (NOx) Concentrations, and Carbon Monoxide (CO) Concentrations at each of the following exhaust points: P-1 and P-2.
(c) Ammonia injection rate at A-1 and A-2 SCR Systems.
(d) Steam injection rate at S-1 & S-3 Gas Turbine Combustors.

The owner/operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the owner/operator shall calculate and record the total firing hours, the average hourly fuel flow rates, and pollutant emission concentrations.

The owner/operator shall use the parameters measured above and District-approved calculation methods to calculate the following parameters:

(e) Heat Input Rate for each of the following sources: S-1 & S-2 combined and S-3 & S-4 combined.
(f) Corrected NOx concentrations, NOx mass emissions (as NO_2), corrected CO concentrations, and CO mass emissions at each of the following exhaust points: P-1 and P-2.

For each source, source grouping, or exhaust point, the owner/operator shall record the parameters specified in conditions 27(e) and 27(f) at least once every 15 minutes (excluding normal calibration periods). As specified below, the owner/operator shall calculate and record the following data:

(g) total Heat Input Rate for every clock hour and the average hourly Heat Input Rate for every rolling 3-hour period.
(h) on an hourly basis, the cumulative total Heat Input Rate for each calendar day for the following: each Gas Turbine and associated HRSG combined and all four sources (S-1, S-2, S-3, and S-4) combined.
(i) the average NOx mass emissions (as NO_2), CO mass emissions, and corrected NOx and CO emission concentrations for every clock hour and for every rolling 3-hour period.
(j) on an hourly basis, the cumulative total NOx mass emissions (as NO_2) and the cumulative total CO mass emissions, for each calendar day for the following: each Gas Turbine and associated HRSG combined, and all four sources (S-1, S-2, S-3, and S-4) combined.
(k) For each calendar day, the average hourly Heat Input Rates, Corrected NOx emission concentrations, NOx mass emissions (as NO_2), corrected CO emission concentrations, and CO mass emissions for each Gas Turbine and associated HRSG combined.
(l) on a daily basis, the cumulative total NOx mass emissions (as NO_2) and cumulative total CO mass emissions, for the previous consecutive twelve month period for all four sources (S-1, S-2, S-3, and S-4) combined.

(1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)

Verification: As part of the annual Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation.

AQ-28 To demonstrate compliance with conditions 20(f), 20(g), 20(h), 21, 24(c) through 24(e), and 25(c) through 25(e), the owner/operator shall calculate and record on a daily basis, the Precursor Organic Compound (POC) mass emissions, Fine Particulate Matter (PM_{10}) mass emissions (including condensable particulate matter), and Sulfur Dioxide (SO_2) mass emissions from each power train. The owner/operator shall use the actual Heat Input Rates calculated pursuant to Condition 27, actual Gas Turbine Start-up Times, actual Gas Turbine Shutdown Times, **actual Gas Turbine Combustor Tuning Times,** and CEC and District-approved emission factors to calculate these emissions. The calculated emissions shall be presented as follows:
(a) For each calendar day, POC, PM_{10}, and SO_2 emissions shall be summarized for: each power train (Gas Turbine and its respective HRSG combined) and all four sources (S-1, S-2, S-3, and S-4) combined.
(b) on a daily basis, the cumulative total POC, PM_{10}, and SO_2 mass emissions, for each year for all four sources (S-1, S-2, S-3, and S-4) combined.

(Offsets, PSD, Cumulative Increase)

Verification: As part of the monthly Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation.

AQ-30 Within ~~sixty (60)~~ **ninety (90)** days of start-up of the MEC, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 to ~~determine the corrected ammonia (NH_3) emission concentration~~ **establish the factors to be used** to determine compliance with Condition 20(e). ~~The source test shall determine the correlation between the heat input rates of the gas turbine and associated HRSG, A-1 or A-2 SCR System ammonia injection rate, and the corresponding NH_3 emission concentration at emission point P-1 or P-2.~~ The source test shall be conducted over the expected operating range of the turbine and HRSG (including, but not limited to, minimum and ~~100%~~ **full** load**, and steam injection power augmentation mode**) to establish the ~~range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining~~ **correction factors that will be used to calculate** ammonia slip levels. **This source test shall be repeated on an annual basis thereafter.** Continuing compliance with Condition 20(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the ~~source test correlation and continuous records of ammonia injection rate~~ **District-approved calculation method**. (TRMP)

Verification: At least ninety (90) days before start-up, the owner/operator shall provide a copy of the source test protocols. Approval of the source test protocols and the source test reports shall be deemed as verification for this Condition. The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the execution of the source tests required in this Condition. Source test results shall be submitted to the District and to the CEC CPM within ~~thirty (30)~~ **sixty (60)** days of the date of the tests.

AQ-31 Within ~~sixty (60)~~ **ninety (90)** days of start-up of the MEC and on an annual basis thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1 and P-2 while each Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum load (including steam injection power augmentation mode) to determine compliance with Conditions 20(a), (b), (c), (d), (f), (g), and (h), while each Gas Turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with Conditions 20(c) and (d), and to verify the accuracy of the continuous emission monitors required in Condition **AQ-**29. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO_2), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and particulate matter (PM_{10}) emissions including condensable particulate matter. (BACT, offsets)

Verification: At least ninety (90) days before start-up, the owner/operator shall provide a copy of the source test protocols. Approval of the source test protocols, as required in Condition 58, and the source test reports shall be deemed as verification for this Condition. The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the execution of the source tests required in this Condition. Source test results shall be submitted to the District and to the CEC CPM within ~~thirty (30)~~ **sixty (60)** days of the date of the tests.

AQ-33 Within ~~sixty (60)~~ **ninety (90)** days of start-up of the MEC and on a~~n~~ biennial basis (once every two years) thereafter, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 while the Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with Condition 26. The gas turbine shall also be tested at minimum load. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to Condition 29 for any of the compounds listed below are less than the BAAQMD Toxic Risk Management Policy trigger levels shown, then the owner/operator may discontinue future testing for that pollutant:

Benzene	**≤** ~~<~~	26.8 pounds/year
Formaldehyde	**≤** ~~<~~	132 pounds/year
Specified PAH's (TRMP)	**≤** ~~<~~	0.18 pounds/year

Verification: The owner/operator shall notify the District and the CEC CPM at least seven (7) working days before the owner/operator plans to conduct source testing as required by this Condition. Source test results shall be submitted to the District and the CEC CPM within ~~thirty (30)~~ **sixty (60)** days of conducting the test.

AQ-34 The owner/operator of the MEC shall submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual. (Regulation 2-6-502)

Verification: At least ninety (90) days before start-up, the owner/operator shall provide a copy of the test protocols. Submittal of the reports to the CEC CPM constitutes verification of compliance with this Condition. All reports shall be submitted to the CEC CPM ~~within~~ when they are due according to District Rules and Regulations.

AQ-40 Prior to the issuance of the BAAQMD Authority to Construct for the Metcalf Energy Center, the Owner/Operator shall demonstrate that valid emission reduction credits in the amount of ~~212.75~~ **172.5** tons/year of Nitrogen Oxides and 28 tons/year of Precursor Organic Compounds or equivalent (as defined by District Regulations 2-2-302.1 and 2-2-302.2) are under their control

through enforceable contracts, option to purchase agreements, or equivalent binding legal documents. (Offsets)

Verification: No more than thirty (30) days after the issuance of an Authority to Construct, the Owner/Operator shall provide a copy of the ATC to the CEC CPM for review.

AQ-46 The **owner/operator** ~~cooling towers~~ shall ~~be~~ properly install~~ed and~~ **the cooling towers and shall** maintain~~ed~~ **them** to minimize drift losses. The cooling towers shall be equipped with high-efficiency mist eliminators with a maximum guaranteed drift rate of 0.0005%. The maximum total dissolved solids (TDS) measured at the base of the cooling towers or at the point of return to the wastewater facility shall not be higher than 5,438 ppm**w**~~v~~ (mg/l). The owner/operator shall sample the water at least once per day. (PSD)

Verification: At least thirty (30) days prior to installation, the owner/operator shall submit to the CEC CPM a performance guarantee letter from the cooling tower manufacturer. As part of the compliance record, the owner/operator shall keep records on-site on the ~~TSC~~ **TDS** content of water in the cooling tower.

AQ-47 The owner/operator shall perform a visual inspection of the cooling tower drift eliminators at least once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to the initial operation of the Metcalf Energy Center, the owner/operator shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminators and certify that the installation was performed in a satisfactory manner. Within ~~sixty (60)~~ **ninety (90)** days of the initial operation of the cooling tower, the owner/operator shall perform an initial performance source test to determine the PM_{10} emission rate from the cooling tower to verify compliance with the vendor-guaranteed drift rate specified in Condition 46. The CPM may, in years 5 and 15 of cooling tower operation, require the owner/operator to perform source tests to verify continued compliance with the vendor-guaranteed drift rate specified in Condition 46. (PSD)

Verification: As part of the monthly Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation.

AQ-56 The total number of hours during which the Gas Turbines (S-1 and S-3) may be operated in cold startup mode or may undergo combustor tuning shall not exceed 30 hours per calendar year total for each Gas Turbine. (cumulative increase)

Verification: As part of the annual Air Quality Report, the project owner shall indicate the date, time, and duration of any violation of this Condition.

AQ-57 To demonstrate compliance with condition 56, the owner/operator shall record the start time, end time and duration of each Gas Turbine Cold Startup and each Combustor Tuning Period. On an annual basis, the owner/operator shall record the total number of hours during which each turbine (S-1 and S-3) the Gas Turbines operated in cold startup mode or combustor tuning mode for each calendar year. (cumulative increase)

Verification: During site inspection, the owner/operator shall make all records and reports available to the District, California Air Resources Board, and CPM.

IT IS SO ORDERED.

Date: March 16, 2005

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

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JACKALYNE PFANNENSTIEL
Vice Chair